

FIG. 1



FIG. 2A

1 gtcgacccacgcgtccgctcaggaccttgaaaggctcaggaagaacaaccctTGAgcacc
61 tcagcactcagcATGTTCTCGCTACGTTCAAGCTGTGTGCTGGAAGCTCCTATAGACAT
MetPheLeuAlaThrPheLysLeuCysAlaGlySerSerTyrArgHis 16

121 ATGCGGAATATGAAAGGATTAAGGCACCAAGCTGTGCTGGCCATTGGCCAAGAGCTCAAC
MetArgAsnMetLysGlyLeuArgHisGlnAlaValLeuAlaIleGlyGlnGluLeuAsn 36

181 TGGAGAGCACTGGGGGATTCCAGTCCCGGGTGGATGGGTCAAGTTCGACGTCGGAGCTCT
TrpArgAlaLeuGlyAspSerSerProGlyTrpMetGlyGlnValArgArgArgSerSer 56

241 CTGCTTGGTTCTCAACTGGAAGCAACACTCTATAGTGACCAGGAGCTGTCCTACATCCAG
LeuLeuGlySerGlnLeuGluAlaThrLeuTyrSerAspGlnGluLeuSerTyrIleGln 76

301 CAGGGAGAGGTGGCTATGCAGAAGGCCTTGGGCATACTCAACAACCAGGAAGGCTGGAAG
GlnGlyGluValAlaMetGlnLysAlaLeuGlyIleLeuAsnAsnGlnGluGlyTrpLys 96

25

361 AAGGAAAGCCAGCAGGAGAACGGGGACGAAGTGCTAAGTAAGATGGTGCCAGATGTGGGC
LysGluSerGlnGlnGluAsnGlyAspGluValLeuSerLysMetValProAspValGly 116

421 AAGGTGTTTCGCTTGGAGGTGGTGGTAGACCAGCCCATGGACAGACTCTATGAAGAACTT
LysValPheArgLeuGluValValValAspGlnProMetAspArgLeuTyrGluGluLeu 136

481 GTGGACCGCATGGAGGCCATGGGAGAGTGGAACCCAAATGTCAAGGAGATCAAGGTCCTG
ValAspArgMetGluAlaMetGlyGluTrpAsnProAsnValLysGluIleLysValLeu 156

541 CAGAGGATTGGAAGACACGGTCATCACTCATGAGCTGGCTGCGGCGGCAGCAGGCAAC
GlnArgIleGlyLysAspThrValIleThrHisGluLeuAlaAlaAlaAlaAlaGlyAsn 176

601 CTGGTGGGGCCTCGAGACTTCGTGAGCGTGCGCTGTACCAAGCGCAGAGGTTCCACCTGT
LeuValGlyProArgAspPheValSerValArgCysThrLysArgArgGlySerThrCys 196

661 GTGCTGGCAGGCATGGCCACACATTTTGGGGAGATGCCGGAGCAGAGTGGTGTATCAGA
ValLeuAlaGlyMetAlaThrHisPheGlyGluMetProGluGlnSerGlyValIleArg 216

45

721 GCTGAACACGGCCCCACCTGCATGGTGCTTCATCCACTGGCTGGAAGTCCCTCCAAGACT
AlaGluHisGlyProThrCysMetValLeuHisProLeuAlaGlySerProSerLysThr 236

23

781 AAACCTCACTTGGCTGCTCAGTATTGACCTGAAGGGGTGGCTGCCGAAGACAATCATCAAC
LysLeuThrTrpLeuLeuSerIleAspLeuLysGlyTrpLeuProLysThrIleIleAsn 256

FIG. 2B

841 CAGGTCCTATCGCAGACCCAGATAGAGTTGCGCAACCACTGCGCAAGCGCCTGGAAGCC
GlnValLeuSerGlnThrGlnIleGluPheAlaAsnHisLeuArgLysArgLeuGluAla 276

901 AGCCCTGCCTCTGAGGCCAGTGTTAAggactgtccaccacattgacctgcaaattcattg
SerProAlaSerGluAlaGlnCysEnd 284

961 gaagctctcacaggaagcctgcaagtctgtccatcttcagctaacagcatcgggaggggt
1021 ggtagtcaggagacactaggactgactggtaaaatcaggatcagcaaaatagaaatgagg
1081 cttagaataaaaagttctctagtgtctccactgcatagtgtgaaggctaaggataagt
1141 agctatgaaacctttcatctaggcttgtatatgctgacctaaaagacaccagcagctacg
1201 aacaggggatgctaaggatcggggaactgttgtcttaccagctccaaatgtcactacctga
1261 aggcagtgtgcacacaaagcaagggtcttgccctaggaaactctgtaaaagttctcctctgt
1321 aaaaggccagaacttgaatgaaactacctacaaaggcctttccagagtattccaacttt
1381 tctctgaggagaaatgaaacctcattgtgccgacttcctactaatcccatgacAATAA
1441 AgaacatacatAAAAAAAAAAAAAAAA



FIG. 3A

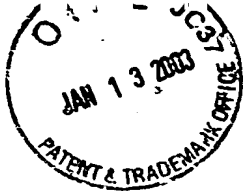


FIG. 3B

Mouse: 450 CCAGCCCATGGACAGACTCTATGAAGAACTTGTGGACCGCATGGAGGCCATGGGAGAGTG 509
|||||
Human: 507 CCAGCCCATGGAGAGGCTCTATGAAGAGCTCGTGGAGCGCATGGAAGCAATGGGGGAGTG 566
Mouse: 510 GAACCCAAATGTCAAGGAGATCAAGGTCCTGCAGAGGATTGGAAGACACGGTCATCAC 569
|||||
Human: 567 GAACCCCAATGTCAAGGAGATCAAGGTCCTGCAGAAGATCGGAAAGATACATTTCATTAC 626
Mouse: 570 TCATGAGCTGGCTGCGGCGGCAGCAGGCAACCTGGTGGGGCCTCGAGACTTCGTGAGCGT 629
|||
Human: 627 TCACGAGCTGGCTGCCGAGGCAGCAGGAAACCTGGTGGGGCCCCGTGACTTTGTGAGCGT 686
Mouse: 630 GCGCTGTACCAAGCGCAGAGGTTCCACCTGTGTGCTGGCAGGCATGGCCACACATTTTGG 689
|||||
Human: 687 GCGCTGTGCCAAGCGCCGAGGCTCCACCTGTGTGCTGGCTGGCATGGACACAGACTTCGG 746
Mouse: 690 GGAGATGCCGGAGCAGAGTGGTGTATCAGAGCTGAACACGGCCCCACCTGCATGGTGCT 749
|||
Human: 747 GAACATGCCTGAGCAGAAGGGTGTATCAGGGCGGAGCACGGTCCCACTTGCATGGTGCT 806
Mouse: 750 TCATCCACTGGCTGGAAGTCCCTCCAAGACTAAACTCACTTGGCTGCTCAGTATTGACCT 809
|||
Human: 807 TCACCGTTGGCTGGAAGTCCCTCTAAGACCAAACTTACGTGGCTACTCAGCATCGACCT 866
Mouse: 810 GAAGGGGTGGCTGCCGAAGACAATCATCAACCAGGTCCTATCGCAGACCCAGATAGAGTT 869
|||||
Human: 867 CAAGGGGTGGCTGCCCAAGAGCATCATCAACCAGGTCCTGTCCCAGACCCAGGTGGATTT 926
Mouse: 870 CGCCAACCACCTGCGCAAGCGCCTGGAAGCCAGCCCTGCCTCTGAGGCCAGTGTTAAGG 929
|||||
Human: 927 TGCCAACCACCTGCGCAAGCGCCTGGAGTCCCACCCTGCCTCTGAAGCCAGGTGTTGAAG 986
Mouse: 930 AC 931
||
Human: 987 AC 988

Identities = 18/19 (94% identity), mouse segment 970-988 to human segment 1051-1069

Mouse: 970 ACAGGAAGCCTGCAAGTCT 988
||
Human: 1051 ACTGGAAGCCTGCAAGTCT 1069

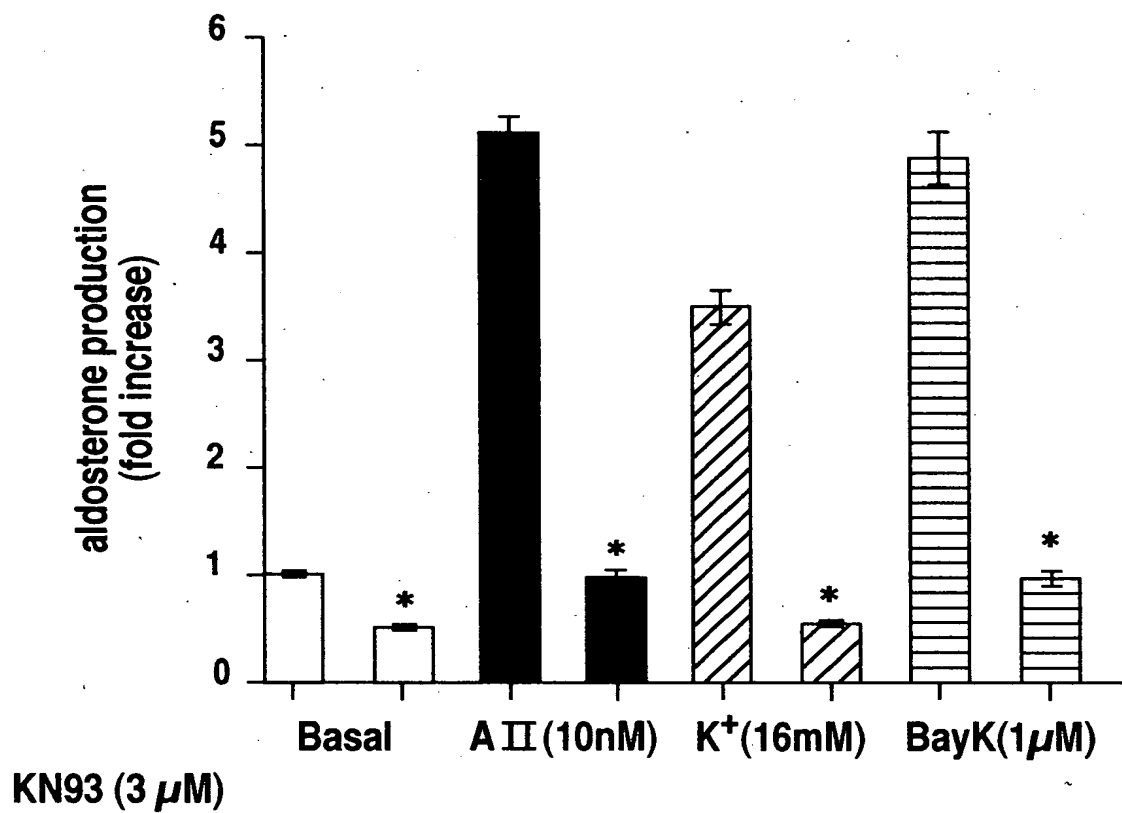


FIG. 4



FIG. 5

				C1	C2	
Bovine	1	MLLATFKLCA	GSSYRHvRSM	KGLqQQAVLA	IGQELNRRAL	GGPaPaaWIN 50
Human		MLLATFKLCA	GSSYRHMRNM	KGLRQQAVMA	IsQELNRRAL	GGPtPstWIN
Mouse		MFLATFKLCA	GSSYRHMRNM	KGLRhQAVLA	IGQELNRRAL	GdssPg.wmg
Ovine		.....	.....	.....	.....	.....
Consensus		MLLATFKLCA	GSSYRHMRNM	KGLRQQAVLA	IGQELNRRAL	GGP-P--WIN
		A	CK			
Bovine	51	QVRRRGsLLG	SQLEDpLYSD	QELAhIQQGE	EAMQrALGIL	kdQEGWKES 100
Human		QVRRRSLLG	SrLEETLYSD	QELAYIQQGE	EAMQKALGIL	sNQEGWKES
Mouse		QVRRRSLLG	SQLEaTLYSD	QELsYIQQGE	vAMQKALGIL	nNQEGWKES
Ovine		.....	.....	.....	.....	.....KKE n
Consensus		QVRRRSLLG	SQLE-TLYSD	QELAYIQQGE	EAMQKALGIL	-NQEGWKES
Bovine	101	rQaNGDEVLS	KVIPDVGKVF	RLEVVDQPM	ERLYEELVER	MEAMGEWNPN 150
Human		qQdNGDkVMS	KVVPDVGKVF	RLEVVDQPM	ERLYEELVER	MEAMGEWNPN
Mouse		qQeNGDEVLS	KmVPDVGKVF	RLEVVDQPM	DRLYEELVDR	MEAMGEWNPN
Ovine		rQaNGDEVLS	KVIPDVGKVF	RLEVVDQPM	ERLYEELVER	MEAMGEWNPs
Consensus		-Q-NGDEVLS	KV-PDVGKVF	RLEVVDQPM	ERLYEELVER	MEAMGEWNPN
					A	
Bovine	151	VKEIKVLQKI	GKDTVITHEL	AAEvAGNLVG	PRDFVSVRCT	KRRGSmCVLA 200
Human		VKEIKVLQKI	GKDTfITHEL	AAEAAGNLVG	PRDFVSVRCa	KRRGStCVLA
Mouse		VKEIKVLQrI	GKDTVITHEL	AAaAAGNLVG	PRDFVSVRCT	KRRGStCVLA
Ovine		VKEIKVLQKI	GKDTIITHEL	AAEAAGNLVG	PRDFVrVRCT	KRRGSmCVLA
Consensus		VKEIKVLQKI	GKDTVITHEL	AAEAAGNLVG	PRDFVSVRCT	KRRGS-CVLA
				CD C		
Bovine	201	GMATLYeEMP	qQKGVIRAEH	GPTCMVLrPL	AGSPSrTKLT	WLLSIDLKGW 250
Human		GmTdFgnMP	eQKGVIRAEH	GPTCMVLHPL	AGSPSKTKLT	WLLSIDLKGW
Mouse		GMAThFgEMP	eQsGVIRAEH	GPTCMVLHPL	AGSPSKTKLT	WLLSIDLKGW
Ovine		GtATLYeEMP	qQKGVIR...	.....	.....	.....
Consensus		GMATL--EMP	-QKGVIRAEH	GPTCMVLHPL	AGSPSKTKLT	WLLSIDLKGW
Bovine	251	LPKTIINQVL	SQTQVDFANH	LRKRLEScPA	1EARC	285
Human		LPKsIINQVL	SQTQVDFANH	LRKRLEShPA	SEARC	
Mouse		LPKTIINQVL	SQTQIEFANH	LRKRLEasPA	SEAqC	
Ovine		.....	.....	.....	.....
Consensus		LPKTIINQVL	SQTQVDFANH	LRKRLES-PA	SEARC	